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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/087,130	02/28/2002	Nikki M. Bruner	P1569US01	4401

7590 01/21/2005

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Oklahoma City, OK 73102-8820

EXAMINER

TORRES, JOSEPH D

ART UNIT	PAPER NUMBER
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2133

DATE MAILED: 01/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/087,130	Applicant(s) BRUNER ET AL.	
	Examiner Joseph D. Torres	Art Unit 2133	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 November 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 November 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. In view of the amendment filed 11/16/2004, all objections to the drawings are withdrawn.

Response to Arguments

2. Applicant's arguments filed 11/16/2004 have been fully considered but they are not persuasive.

The Applicant contends, "The Applicant expressly traverses the Examiner's following assertion in the Office Action: Schachner teaches a reference signal is selected as an input sequence for comparing with readback (output) data to track errors. . . ." This statement overreachingly reads the claimed comparison of the input sequence and output sequence of claim 1 onto Schachner 730's comparison of an input signal to an input reference value".

The Examiner disagrees and asserts that col. 21 lines 38-41 of Schachner explicitly teach that the first NRZ data input becomes the reference data (Note: the Abstract in Schachner teaches that an input signal is a signal stored the recording medium hence the NRZ data input at 1402 in Figure 14 of Schachner is input data). Why would anyone expect the input to have similar values to the reference value, if some other signal different from the reference value was stored on the recording medium? The

Examiner asserts that in a noiseless channel the stored input signal would be identical to the reference signal since the reference signal is substantially the input signal prior to being stored on the recording medium, which Schachner explicitly confirms in col. 21 lines 38-41 of Schachner.

The Applicant contends, " Schachner '730 neither discloses nor suggests predicting an error rate on the comparative basis of an input sequence and a corresponding output sequence".

The Examiner disagrees and asserts that the abstract in Schachner teaches that the circuit in Figure 14 of Schachner is a means for analyzing a signal using Data Comparator 1414 in Figure 14 to compare the input signal received after storage on the recording medium to a reference value representing the input value prior to storage (col. 21 lines 38-41 of Schachner explicitly teach that the first NRZ data input becomes the reference data) using SAM values to determine proximity (col. 16, lines 49-65 in Schachner; see also claims 50 and 51). Col. 4, lines 32-35 in Schachner explicitly suggests the use of SAM to determine error rate. Hence Schachner teaches predicting an error rate on the comparative basis of an input reference sequence and a corresponding output sequence of stored input values using SAM values.

17. All amendments and arguments by the applicant have been considered. It is the Examiner's conclusion that claims 1-27 are not patentably distinct or non-obvious over the prior art of record in view of the references, Schachner; Joseph M. et al. (US 6442730 B1, hereafter referred to as Schachner) and Reed; David E. et al. (US

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6115198 A, hereafter referred to as Reed) as applied in the last office action, filed 08/16/2004. Therefore, the rejection is maintained.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-3, 15-20 and 27 are rejected under 35 U.S.C. 102(e) as being anticipated by Schachner; Joseph M. et al. (US 6442730 B1, hereafter referred to as Schachner).

See the Non-Final Action filed 08/12/2004 for detailed action of prior rejections.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
4. Claims 4, 6, 8, 9, 11, 12, 23, 24 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schachner; Joseph M. et al. (US 6442730 B1, hereafter referred to as Schachner).

See the Non-Final Action filed 08/12/2004 for detailed action of prior rejections.

5. Claims 5, 7, 10, 13, 14, 21, 22 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schachner; Joseph M. et al. (US 6442730 B1, hereafter referred to as Schachner) in view of Reed; David E. et al. (US 6115198 A, hereafter referred to as Reed).

See the Non-Final Action filed 08/12/2004 for detailed action of prior rejections.

Conclusion

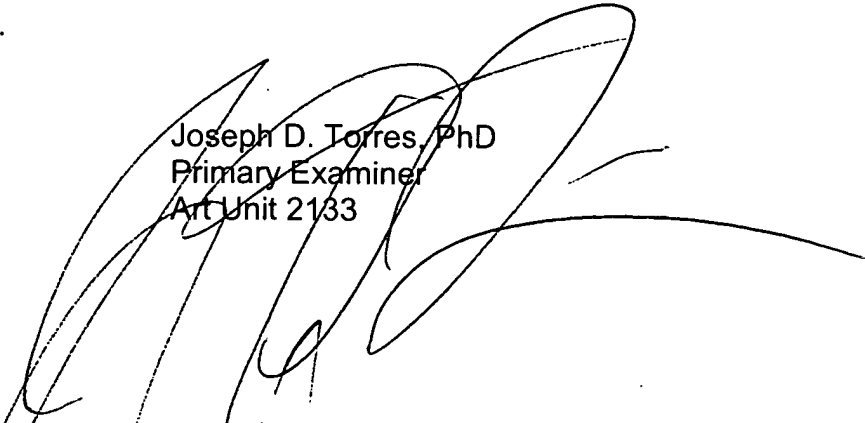
6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph D. Torres whose telephone number is (571) 272-3829. The examiner can normally be reached on M-F 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert Decady can be reached on (571) 272-3819. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Joseph D. Torres, PhD
Primary Examiner
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